THE TENACITY OF DIPHTHERITIC VIRUS.

BELFONTI (*Riforma Med.*, March 23, 1894; *British Med. Journal*, May 5, 1894) records a fatal case of diphtheria in a child, in which cultivation of the membrane showed the presence of Loeffler's bacillus and a streptococcus. The interest in the case lies in the fact that the infection seems to have been traced to a brother who had survived an attack of the disease seven months before. After the fatal termination of the second case, an examination of the pharynx of the other child revealed a chronic follicular tonsillitis, with chronic indolent enlargement of the cervical glands. Exudation from the tonsil showed the presence of the same microbes as were found in the fatal case, and extremely virulent cultures of the Loeffler bacillus were obtained. A second examination, three months later, showed that the bacillus was still present, but in a state of great attenuation, giving rise only to slight local inflammation when inoculated into susceptible animals. In the case of the surviving child, immunity had, of course, been secured by his attack; but for seven months after his illness he continued to carry in his throat and its secretions a germ of extreme virulence, which had brought about the death of his sister after that interval, and still continued to be a menace to others, in decreasing degree, for several months longer. The importance of rigid disinfection and even bacteriological examination of the secretions of the throat, before a patient is allowed to mix with healthy people, is pertinently emphasized by this interesting observation.

A DIASTOLIC BRUIT AT THE APEX IN THE HEART DISEASE OF CHILDREN.

THEODORE FISHER (*British Medical Journal*, April 28, 1894, p. 906) calls attention to a diastolic or sometimes presystolic sound not infrequently heard at the apex in association with a dilated heart. Donkin, in his *Diseases of Children*, notes a well-marked example in a child of eight years, "where a loud and long diastolic murmur, as well as a systolic, was always heard at the apex, but the necropsy showed a mitral orifice of fully three inches round, and no lesion other than a few small granulations on the auricular surface."

Fisher refers to the post-mortem records of thirteen cases of adherent pericardium in children who died in Guy's Hospital during a period of seven years, and in the clinical histories of five of these a diastolic or presystolic bruit had been present at the apex, yet the necropsy showed that the mitral orifice was dilated and the aortic valves were not thickened. Whatever explanation may be brought to explain this sound, the author observes, the fact remains that the bruit did not point to stenosis of the mitral valve. In three of these cases, as in another case under the care of Dr. Wheaton, in the Royal Hospital for Children and Women, a systolic thrill was noted—another confusing element if the heart was beating so rapidly that the exact time of its occurrence could not always be easily ascertained. Cheadle has noticed the frequency of a diastolic sound in the early endocarditis of children, and states that, although it may disappear, it generally develops into the presystolic bruit of mitral stenosis. Fisher suggests that this diastolic sound may indicate temporary dilatation of the heart. The sound heard in the diastolic interval in association with a dilated heart, may be either a sound separated by an interval both from the second or the first sound, or it may be a low-pitched presystolic rumble, which may also alternate with a diastolic sound. The presystolic rumble of a dilated heart is probably too low pitched to give much difficulty in diagnosis, and when changed for a diastolic sound the accentuation and rhythm may be that of the *bruit de galop.* But there is, he believes, a diastolic murmur heard in the dilated heart of children which is presumably due to that dilatation and is indistinguishable from the diastolic sound of mitral stenosis. It may be best heard at the impulse or just outside, or over the right ventricle in the third and fourth or fourth and fifth intercostal spaces. In one position it is probably produced in the left ventricle, in the other in the right. In the same heart it may sometimes be best heard in one position, sometimes in the other, and then points probably to general dilatation. Whether such a murmur indicates mitral stenosis or dilatation of the heart is a question of some importance. The most common cause of dilatation is adherent pericardium, and death from this condition is much more common in children than from mitral stenosis; so that the immediate prognosis of a diastolic sound indicating a dilated heart is much graver than that of one pointing to mitral stenosis.

THE COEXISTENCE OF INFECTIOUS DISEASES.

CAIGER (*British Medical Journal,* May 5, 1894, p. 969), at a recent meeting of the Epidemiological Society, presented a study on the coexistence or close succession of two or more infectious diseases in the same individual. His experience at Stockwell, he said, had satisfied him that such concurrence of infections was as frequent as mere probabilities would explain, and that, so far from affording protection against other diseases, some certainly increased the susceptibility thereto. In the last four years he had seen 362 cases of two and 17 of three diseases running some part of their courses concurrently; in 200 of these the acute febrile stages of two or three coincided. The priority of the several diseases was calculated from their known incubation periods. The primary disease was scarlatina in 197, which was complicated by diphtheria in 97 cases; varicella, in 43; measles, in 31; whooping-cough, in 13; erysipelas, in 10; enteric fever, in 2, and typhus, in 1. Scarlatina was a complication in no fewer than 88 among 97 in which the primary disease was diphtheria; in 20 among 23 of varicella; in 14 of 17 of whooping-cough; in 6 of 9 of enteric, and 9 of 18 of measles, though here diphtheria accounted for another 7. Among the 17 triple attacks scarlatina was the primary disease in 9, and a complication in 4 only, diphtheria holding the highest place with 9. During the past six years 48,367 cases of scarlatina had been admitted into the hospitals of the Asylums Board; of these 3166, or 6.54 per cent., were complicated, 1094 with diphtheria, 899 with varicella, 703 with measles, and 404 with whooping-cough; the relative numbers of diphtheria and whooping-cough being probably owing to the fact that many had already had whooping-cough in infancy, while diphtheria, though less frequent, might and often did recur: these four diseases accounted for 3100, or all but 66. The questions suggested by these figures were: (1) Did any disease render the individual less or more susceptible to infection by another? (2) Did the